D7.4 – Final event

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CONTROL SHEET

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0.2	08/01/2016	Giacomo Somma, ERTICO	Final version with speakers feedback
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This deliverable is a draft document subject to revision until formal approval by the European Commission.

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Terms and abbreviations

Term / Abbreviation	Definition
CIP	Competitiveness and Innovation Programme
EC	European Commission
ITS	Intelligent Transport Systems and Services
PCP	Pre-commercial Procurement
PPI	Public Procurement of Innovation
TRL	Technology Readiness Level

1 Introduction

1.1 Purpose of Document

This report provides the proceedings of the P4ITS final event held on the 6 October 2015 at the 22nd ITS World Congress in Bordeaux (F).

1.2 Intended audience of this document

This report is a public deliverable of P4ITS intended as report to the EC and P4ITS network partners.

1.3 P4ITS Contractual References

P4ITS is a Thematic Network of the ICT Policy Support Programme (ICT PSP), Competitiveness and Innovation Framework Programme (CIP). It stands for Public procurement of innovation for cooperative ITS.

The Grant Agreement number is 621049 and project duration is 30 months, effective from 01 December 2013 until 31 May 2016. It is a contract with the European Commission, DG CONNECT.

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Any communication or request concerning the grant agreement shall identify the grant agreement number, the nature and details of the request or communication and be submitted to the following addresses:

> **European Commission**
> **Communications Networks, Content and Technology**
> **B-1049 Brussels**
> **Belgium**
> By electronic mail: CNECT-ICT-PSP-6210495@ec.europa.eu

2 Final event preparation

The P4ITS final event has been prepared and organised by the project coordinator on behalf and with the contribution of the consortium partners and associated partners. The session proposal submitted to the International Programme Committee of the 22nd ITS World Congress is given here below.

1. Organiser's full contact details:

Giacomo Marco SOMMA, Manager, ERTICO – ITS Europe, Belgium, g.somma@mail.ertico.com

2. Topic, subtopic, and key words:

Topic: 2. Cooperative ITS deployment challenges

Sub-topic: D. Financing: Procurement; Cost-benefit; Deployment strategies; Business cases.

Key words: Procurement, Innovation, PPI, PCP, cooperative ITS, P4ITS.

3. Session title:

Innovation Procurement: challenge and opportunity for ITS deployment

4. Session description and format (round table, formal presentations, audience engagement, etc.)

Format: Formal presentations with audience engagement.

Description: Innovation procurement has a great potential to boost the deployment of ITS towards concrete mobility needs of people and goods. Through procurement actions, public authorities and road operators can indeed drive the development of new R&D solutions from various vendors and/or jointly act as early adopters of innovative solutions nearly or newly arriving on the market. However, this potential is far from being achieved due to demand fragmentation as well as lack of knowledge and experience of different procedures, approaches and tools to innovation procurement. The objectives of this session, organised as final event of the P4ITS thematic network on Public Procurement of Innovation for cooperative ITS, are therefore to present to a large audience the results and experiences from various international PPI/PCP projects, to discuss the experts' views on the use of different procurement instruments and approaches towards concrete public sector needs in the field of ITS, and to explore common issues and themes with their counterparts from other entities and countries with a view to developing a more concerted approach overcoming current limitations and barriers to deployment.

5. What is special about this special interest session? Please explain why a managed approach to the topic is needed as opposed to 'ad hoc' technical papers grouped in one session.

Innovation procurement suffers from ITS market fragmentation, lack of knowledge, experience and best practices needed by public authorities and road operators (procurers, lawyers and ITS experts), as well as their counterparts to bring innovative solutions into mobility services. The reason for setting up this session lies in the need of bringing together all these actors to create awareness and first hand exchange information through audience engagement. This aims also at establishing P4ITS as long-term network in the domain of public procurement of innovation in Cooperative ITS.

6. Has this subject featured in SISs at World or European Congresses before? If so please specify where/when and explain why the subject area continues to justify attention.

This topic was covered by SIS n.36 on "Public procurement of innovation: The final step to ITS deployment?" at the 10th European congress held in Helsinki (FIN). The subject continues to justify attention because of the potential and growing interest of stakeholders in bringing innovation into ITS through procurement actions. This session will present the results of P4ITS and other PPI/PCP projects in the field of ITS and will engage the audience, stakeholders from various entities and countries, in a discussion on key procurement topics.

7. Where do you see your audience coming from? Do you have any plans to publicise the session beyond its appearance in the Congress Programme?

The audience will be formed of practitioners responsible of or dealing with procurements in road and transport operator organisations as well as of stakeholders willing to offer their products and services through these procurements. The session will be publicized through the ERTICO network website, the P4ITS partners as well as by the other invited speakers, who are coordinating major European projects on public procurement in the transport sector.

8. What output do you plan from the session e.g. a report, technical paper a webinar. Will there be other follow-up?

The outcomes of this session will be integrated into the P4ITS compendium, a public deliverable in which the cases presented by the P4ITS network partners and the different initiatives started in Europe on the subject of innovation procurement are described. The outcomes may be used also for another public deliverable of P4ITS: a document containing recommendations and guidelines on innovation procurement for C-ITS.
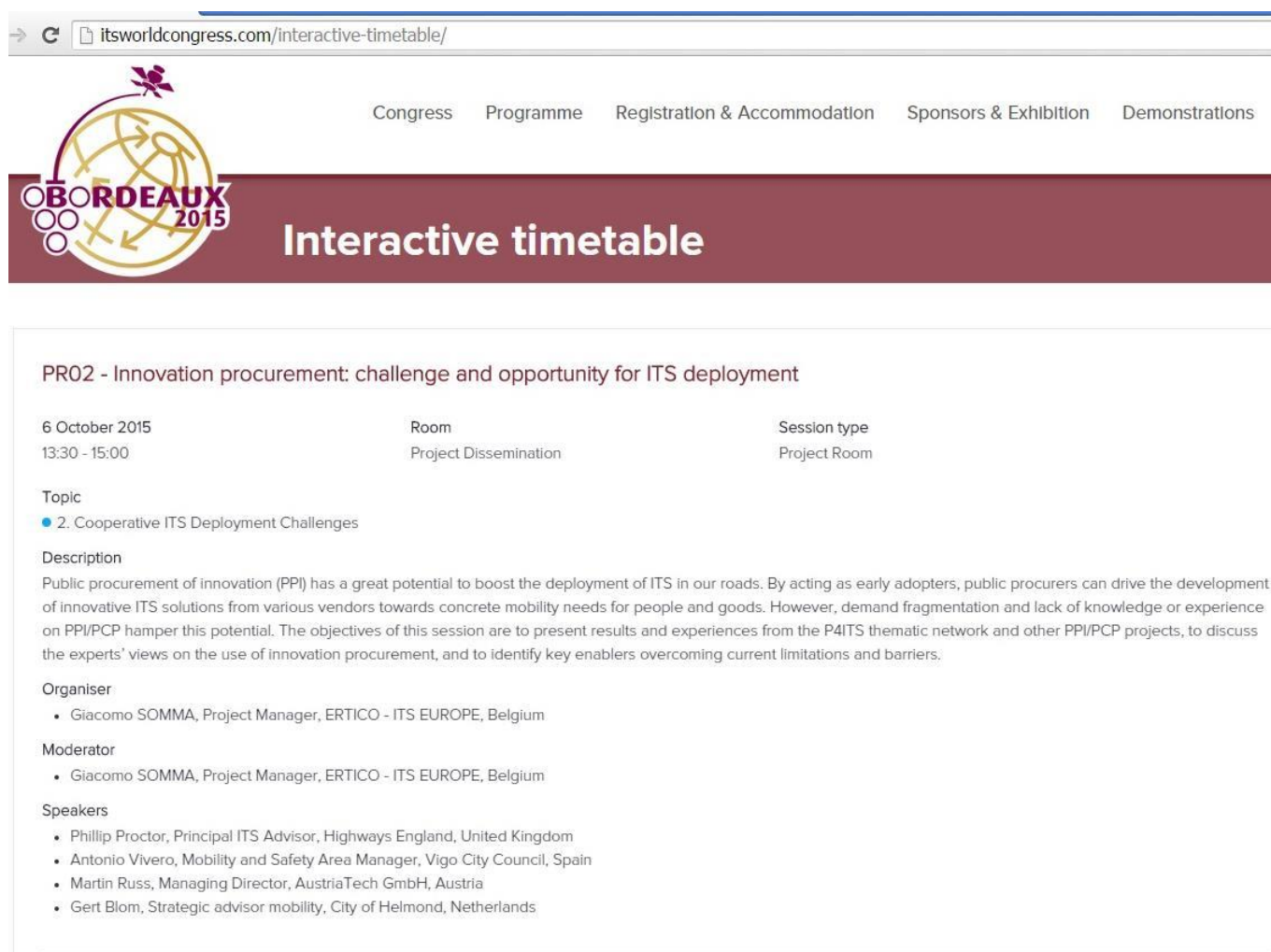
9. Name of moderator and names of a minimum of 3 confirmed speakers.

Moderator:

- Giacomo Marco SOMMA, Project Manager, ERTICO – ITS Europe, Belgium

Speakers:

- Martin RUSS, Managing Director, AustriaTech, Austria

- Phillip PROCTOR, Principal Engineer - ITS Advisor, Highways England, United Kingdom

- Antonio VIVERO, Mobility and Safety Area Manager, Vigo City Council, Spain

- Gert BLOM, Strategic advisor mobility, City of Helmond, The Netherlands

Figure 1: P4ITS session description published on the website of the 22nd ITS World Congress

3   Final event presentations

The P4ITS final event included four presentations characterised by complementary experiences on the deployment of innovative C-ITS solutions in national transport corridor projects (by AustriaTech and Highways England) as well as in urban mobility projects (by the cities of Helmond and Vigo), with procurement approaches ranging from PCP to PPI and conventional tenders. In the next sections these four presentations are summarised highlighting the compelling points from each one of them. The PowerPoint slides used by each presenter can be made available upon request.

3.1   P4ITS Experiences & Strategies in PPI (Martin Russ, AustriaTech)

To set the context of the session, the P4ITS network was firstly presented with its main objectives, achievements and next steps. P4ITS partners were able to achieve a common understanding on PPI by sharing first-hand experiences on real cases / current practices. The final outcomes of the network will be a set of recommendations for policy makers and public procurers and the set-up a long term network to support daily work of future C-ITS procurers.

According to AustriaTech, the way forward for PPI in C-ITS will see the mobility sector evolving into an innovation eco-system where public and private players (public authorities, OEMs, telecoms, … each one with his own responsibilities and "speed") shall work together with user-centred approach. This will require moving from a project-driven landscape to sustainable operation and effective use of infrastructure and to adopt new instruments. In this context PPI is not as a procedure or a set of regulations governed by public procurement laws, but a policy instrument.
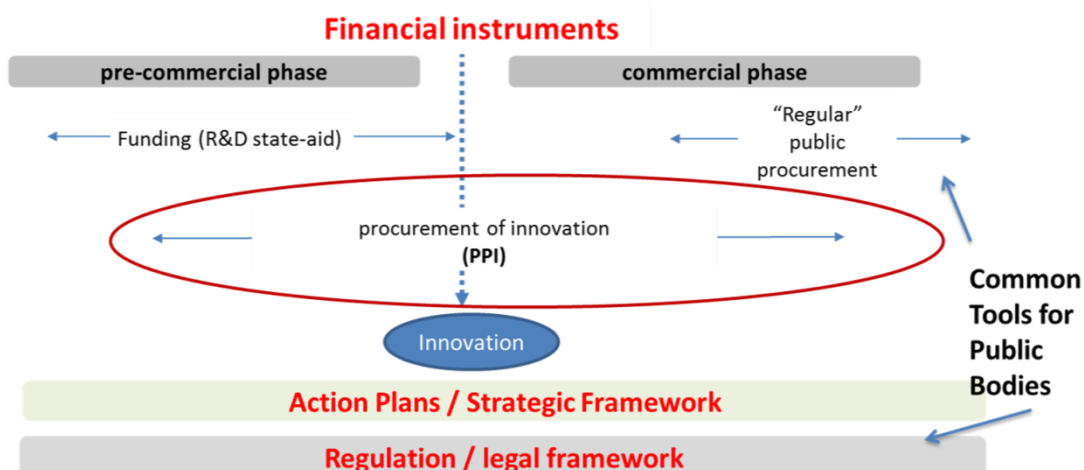

Figure 2: PPI as policy instrument [1]

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[1] Source: illustration modified following: Eva Buchinger, Austrian Institute of Technology, "Von Standards bis Beschaffung", presentation at ITS Austria conference, 21.11.2011, Vienna.

In this context, PPI is therefore a challenge due to current: complex legal framework; different methods and procedures; risk avoiding strategies as traditional approach; innovation as a new topic for public bodies (especially procurement departments); lack of training; need for a policy mix.

At the same time PPI is also a chance to realise: new services for the citizens; service-oriented and innovation-oriented public bodies; innovation-demand first buyers; (large scale) deployment of innovative ITS solutions; adequate instruments for demand-oriented innovation.

The specific needs in the mobility sector (esp. C-ITS) are therefore to establish clear roles of the different stakeholders, to integrate / address all specific layers (data, services, MaaS – Mobility as a Service) and to adopt PPI as way to keep pace and to get an open system & service-landscape.

In Austria, a general framework has been defined for PPI as well as for C-ITS with the Innovation Oriented Procurement Initiative (IÖB) started in 2011 (with 40 Billion € Public Investment/Year), the integration of concept in different sectorial strategies (e.g., National Mobility Plan, ITS Action Plan, Vienna Smart City Strategy, ..) and the competence building & creation of best-practices (by means of PCP pilots, ECo-AT corridor project, …). In the C-ITS context, ECo-AT is a very important project, as it aims to deploy a Common Service Deployment in European corridor NL-DE-AT. Its first phase will be concluded in 2015 (see and the second one will lead to establish a "Living Lab" and an Innovation Cluster, to explore links to neighbouring countries with integrative approach on several aspects (probe data, traffic management, multimodal traveller information).
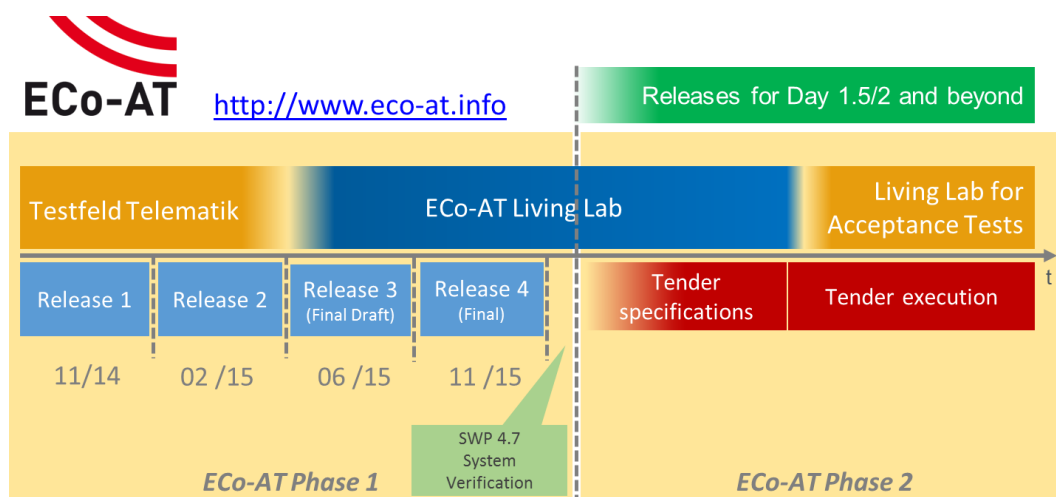
Figure 3: Milestones of the ECo-AT corridor project

Building on Eco-AT, the challenge is to extend step-by-step systems & services with the freight sector as catalyst, to move from highways to cities, and to connect with Eastern Europe with Austria as C-ITS hub. Privacy and liability are central questions for C-ITS technology. P4ITS aims to change the mind-set by discussing PPI as an approach to support innovative procurement for C-ITS. The cooperation within the network is creating the ground for mutual learning and a concerted approach.

3.2 Challenge/ opportunity for ITS deployment (Phillip Proctor, Highways England)

After introducing Highways England and the main challenges faced nowadays (safety, congestion, traffic forecast), Mr. Proctor explained the objective of the EU funded project CHARM, which is to move towards an open, modular architecture for an ATMS that is integrated, flexible and scalable, having the ability to easily incorporate new (innovative) or additional (third party) modules. Such an architecture will allow the procuring authorities, Highways England (UK) and Rijkswaterstaat (NL), to improve the operational efficiency by using contemporary traffic management systems to cater for developments in traffic management within the agencies. This shall prevent future vendor lock-in and allow plugging in more easily new modules that can bring breakthrough innovations to traffic management services. <u>Three new modules</u> have been created for the CHARM architecture in this <u>joint PCP action</u> by the two authorities to achieve radical improvements in traffic management services that contribute to improving the road network performance and safety and reducing CO_2 emissions:

- Lot 1: Advanced distributed network management
- Lot 2: Detection & Prediction of Incidents
- Lot 3: Support of Cooperative ITS Functions

A joint procurement allows road authorities to reduce the use of consultancies, to bring the supplier into the development process, and to open the market not just a Highways England solution. On the other side, a joint action gives suppliers notification of the intent to buy a common solution, which is not tailored to just one single road operator and which allow them to engage with real users not just buyers. The approach of CHARM PCP supports a wider market, focuses on outcomes, and provides more opportunity for innovation. The project is organised in the following three phases:

- Phase 1: demonstration of the feasibility (<u>completed</u>)
- Phase 2: development and evaluation of prototypes (<u>ongoing</u>)
- Phase 3: demonstration of a limited volume of prototypes in an operational environment

All contractors (11) successfully completed Phase 1, but only 8 contractors provided promising results and were invited to submit proposals for Phase 2 and have been all awarded contracts. Up to date, the contract savings over pre-tender estimate have been equal to 6%, but IPR aspects need to be carefully considered. In the case of CHARM, the savings with/without IPR differ by 400%.

3.3 The Helmond C-ITS deployment approach (Gert Blom, City of Helmond)

Mr. Blom introduced the city of Helmond and its mobility policy aiming at optimising the use of existing infrastructure by deploying urban traffic solutions technology driven (ITS) and by actively

supporting smart mobility pilots and showcases. Helmond has been one of the pilot sites of the EU funded project FREILOT, in the frame of which 14 intersections were equipped to deploy the EEIS - Energy Efficient Intersection Service (priority at intersections, speed and time-to-green advice). This service was operated after the project end with the aim of upgrading RSUs from pre-production to production version, of extending installed road network (city ring-road), and of involving more users and cities. These objectives have been achieved through the city's own investments and, later on, through the EU funded project Compass4D carried out in cooperation with six other cities to pilot three C-ITS services for road safety and energy efficiency, and involving more than 600 vehicles and more than 1200 drivers overall. Compass4D has now come to its end, but there is a huge potential contribution of ITS deployment to policy goals, so all 7 Compass4D-cities expressed commitment to continue services after project life to move from pilot to large scale deployment for a self-sustained market. This will start with Day 1 applications (EEIS) with the Public Transport as main driver and the goal of traffic management as a service. At national level, in Holland the new mobility programme "Beter Benutten" was launched in 2015 with a strong focus on ITS. Within this programme, public authorities in the south-east of Holland decided to include specifications for C-ITS ready solutions in tenders for new long term contracts for public transport. PCP and standardisation procedures will be required before large scale deployment, but in parallel small steps will enable visibility increase, real-life interoperability testing, political support gathering, momentum keeping, etc. This is the approach chosen also for the PCP project A58 Shockwave Traffic Jam (Spookfiles A58) illustrated in Figure 4.
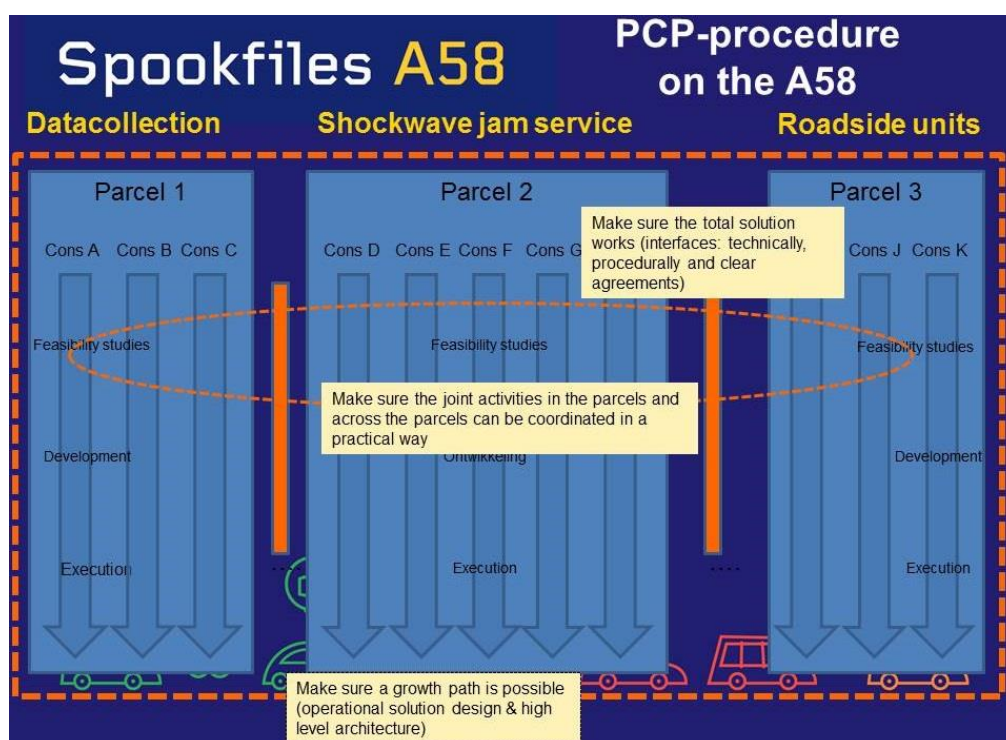

Figure 4: A58 Shockwave Traffic Jam project (Spookfiles A58) in NL

3.4 Public Procurement in ITS: Vigo City Approach & Opportunities (Antonio Vivero, Vigo City Council)

Antonio Vivero briefly introduced the Smart Mobility strategy that the City Council of Vigo is pursuing with a holistic approach involving each management area in the city. Then Mrs. Rosa Blanco (CTAG) described the developments, field tests and pilot deployments carried out though several projects.

A real time traffic information system has been implemented for public transport (both through panels and smartphone apps) with route calculation and priority to delayed buses (Compass4D project), and a Citizen Card Project will bring to full coverage. Several projects on electric mobility have been also carried out: SUM (Sustainable Urban Mobility), Mobi.Europe (electric vehicle renting service), and Mobi2Grid (charging infrastructure for electrical vehicles along the "electric corridor" from Vigo to Oporto). Following to the FOT projects SISCOGA, DRIVE-C2X the pilot project Compass4D has deployed three C-ITS services in both urban and interurban corridors (Energy Efficient Intersection Service - EEIS, Road Hazard Warning - RHW, Red Light Warning - RLW).

Figure 5: Available C-ITS infrastructure and services in the area of Vigo

Thanks to the achievements of these projects and the demonstration of the benefits of C-ITS solutions, innovation procurement (PPI / PCP) can boost Day 1 services from pilot to large scale deployment and enable the development and pre-deployment of after Day 1 services. For the city of Vigo, P4ITS is the first step in this direction, but substantial knowledge, a common approach and standardised procedures are needed to allow procurers of public mobility products/services adopting innovation procurement (PCP / PPI) as instrument to implement interoperable C-ITS solutions.
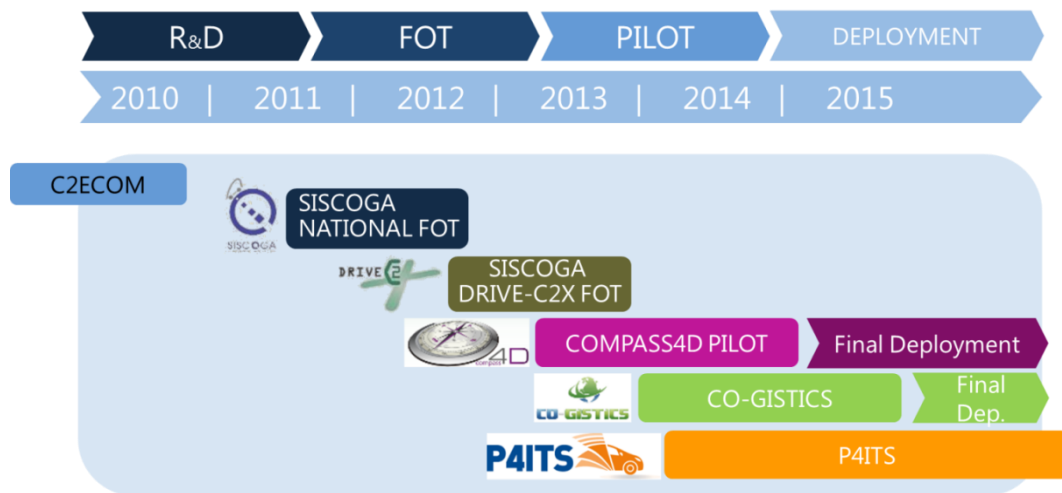
Figure 6: C-ITS deployment path in the city of Vigo and PPI inception through P4ITS

3.5   Final considerations

The final considerations were drawn by the session moderator, G. Somma based on the above four presentations and open exchange facilitated among the experts and the audience, which are in line with the following preliminary recommendations drafted by the P4ITS network:

- Raise awareness on PPI as an approach:
    - PPI to be considered as a flexible approach, rather than as a procurement instrument
    - Need to create culture of using new procurement approaches
    - Strategic awareness: innovation procurement has mainly been addressed at technical level
    - Best practices: need to monitor and evaluate best practices for PPI
    - Concerted approach: harmonised procurement is needed to create an European market
- Create joint, overall strategy for C-ITS policy:
    - Continue working on an European C-ITS strategy and roadmap (e.g., white book)
    - Define policy as basis for coordinated initiatives from different DGs (MOVE, CONNECT, Enterprise) related to C-ITS
    - Coordinate with and foster development of national /regional strategies
- Revise funding mechanisms:
    - Flexible duration and processes for funded contracts, to guarantee matching with actual project needs & context evolution
    - Integration of PPI actions in the frame of EU / national funding programmes (CEF, H2020, etc.)

4   Final event photos

The photos here below show some moments of the P4ITS session.